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ABSTRACT

This study investigated the credibility dimensions underlying standard and nonstandard speech in respect to concept-scale interaction, even though the findings suggest that the factors underlying reactions to nonstandard speech might differ from those underlying reactions to standard speech. The subjects, thirty-two college students enrolled in an introductory speech course, received four randomized treatments. Each treatment consisted of four 40-second tapes. Two modern language instructors read a passage from Aristotle, first in standard English and then in foreign accented English. This process yielded two standard English passages, one Spanish-accented English passage, and one French-accented English passage. The subjects listened to the tapes in varying orders depending upon their treatment groups and then responded to a credibility scale. The results indicated that concept-scale interactions exist even when the concept is operationalized as variations in accent. The dynamism factor disappeared and the authoritativeness factor gained a negative valence when the first speaker switched from standard English to Spanish-accented English. The authoritativeness factor adopted a negative sign and the character factor a positive when switching from standard English to French-accented English. (WR)

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THE FACTOR STRUCTURE OF CREDIBILITY REACTIONS TO STANDARD AND FOREIGN ACCENTED ENGLISH SPEECH

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THE FACTOR STRUCTURE OF STANDARD AND FOREIGN ACCENTED ENGLISH SPEECH

In a classic article Lambert et al. argued that "spoken language is an identifying feature of members of a national or cultural group and any listener's attitude toward members of a particular group should generalize to the language they use."[1] Similarly the credibility reactions to a spoken language should be similar to reactions elicited in interaction with those perceived as members of a group that use it. But because the use of a particular language is a feature of all members of a national or cultural group, the credibility attributed to one member of the language group per se should reflect listeners credibility reactions to the group habitually using it.

Little research has measured the effects of foreign languages upon the reactions of American listeners and this scarcity provided the original motivation for this study and determined its descriptive nature. This paper presents a study that describes the dimensions underlying the credibility reactions that Southwestern American listeners attribute to foreign accented English speech. These dimensions may be manipulated as independent variables in future experimental research which could measure such phenomena as attitudinal and behavioral change.

Credibility

The past decade has seen increasing attention paid to the measurement and manipulation of ethos or credibility. Researchers have shared Aristotle's

awareness that credibility represents several underlying dimensions and factor analytic techniques have revealed the following dimensions which may serve as a conceptual definition of the construct: agreeableness, extroversion, emotional stability, conscienciousness, and culture;[2] character and authoritativeness;[3] objectivity;[4] dynamism, competence, and sociability;[5] and similarity.[6] Most researchers have operationalized credibility as responses to semantic differential type scales; scales which are susceptible to concept-scale interaction and have low generalizability among concepts.[7] This study uses this operationalization of credibility and compares the factor structure of concepts operationalized as standard English and foreign accented English speech.

The following review of the literature treats two types of vocal variables which influence credibility; individual vocal characteristics and language group vocal characteristics. The methodology, results, and discussion sections follow the review.

Personal Vocal Characteristics and Credibility

The literature reveals several studies which measure the influence of personal vocal characteristics such as fluency, pitch, and rate on credibility. These studies are relevant to this report to the extent that foreign accented English speech reflects these personal vocal characteristics. Miller and Hewgill,[8] Sereno and Hawkins,[9] and McCroskey and Mehrley[10] report an inverse relationship between the number of non-fluencies and the speaker's consequent credibility ratings. In addition, several other researchers, Addington,[11] Pearce,[12] Pearce and Conklin,[13] and Pearce and Brommel,[14] reveal that vocal characteristics such as

pitch and rate have a definite influence on credibility ratings of the speaker.

National/Cultural Group Vocal Characteristics

The section section of the review of literature describes the influence of selected language group vocal characteristics on credibility. The review cites four representative studies that describe the effects of (a) socio-economic dialects, (b) regional dialects, and (c) ethnic dialects on the consequent credibility attributed to the speaker identified as a member of one of these groups. Each of these studies deals with a variation of American English and indicates that language qualities as minute as class and regional variations in English can influence credibility.

A person's speech carries class markers as shown by Putman and O'Hern,[15] Harms,[16] and Labov.[17] Harms[18] reported a significant correlation between the status and credibility ratings attributed to speakers. He concluded that high class and high credibility were related as did Moe[19] in a replication of the Harms study.

American English has several regional dialects and Burk[20] reported that college students in Montana could identify six of these. Toomb et al.[21] compared five regional accents and reported that subjects in Illinois rated the New York dialect higher on dynamism and lower on sociability than General American, Northeastern, and Southeastern dialects. Of the five, the Southern dialect was rated lowest on composure and competence.

A speaker's voice carries ethnic correlates and these ethnic markers can influence the credibility attributed to a speaker perceived to be a

member of an ethnic group. Buck found that both black and white listeners rated standard English speakers higher on the credibility dimensions of trustworthiness and competence than identifiable Negro speakers.[22]

One may conclude that vocal characteristics, be they the fluency, pitch, and rate of individual speakers or the language group vocal characteristics of socio-economic, regional, and ethnic dialects, definitely influence credibility. The trend of the results suggests that speakers of standard English speech obtain higher credibility ratings than speakers of non-standard English speech. Unfortunately, no study investigated the credibility dimensions underlying such standard and non-standard speech in respect to concept-scale interaction even though the findings suggest that the factors underlying reactions to non-standard speech might differ from those underlying reactions to standard speech. The following section of this report describes a study which conducted such a description.

METHOD

The first section of this paper reviewed the literature measuring the effects of vocal characteristics on credibility. This section develops the procedures, design, variables, and method of analysis used in testing the predictions advanced in the first section of the report.

Procedures

Subjects. The subjects (n = 32) were students enroled in introductory speech courses at the University of Oklahoma. They were tested during both regular class periods and at special evening sessions in April and May of 1972. The great majority of subjects were second semester freshmen whose average age was 18. Generalizability of the results of this descriptive study will be technically limited to statements about the population from which they have been selected, i. e. students in the basic course in Speech Communication.

Sampling Procedures. Four classes from the population of basic speech courses which had not taken part in prior research projects were chosen for this study. These sections consisted of the available population at the time of testing.

Testing Procedure. At the beginning of the testing session each member of each group of subjects received a response booklet containing a letter of introduction and four sets of credibility scales.

After the subjects completed reading the letter of introduction

the researcher activated the first treatment tape at 3.5 IPS. and at the standard volume setting. Following each treatment, subjects were instructed to respond to the first set of credibility scales. An identical process was followed after each of the remaining three treatments. At each of the testing sessions the order of the treatment tapes was altered to fit the requirements of a standard Latin Square design. Thus, the listeners in Group A heard the treatment tapes in the order a, b, c, d; listeners in Group B heard the tapes in the order b, c, d, a; listeners in Group C heard the tapes in the order c, d, a, b; while listeners in Group D heard the tapes in the order d, a, b, c.

Design

For this panel study, subjects received four treatments randomized under the restrictions of the Latin Square design.[23] This alternative to randomized treatments was suggested by Winer to control for potential bias caused by sequence interactions with the dependent variables.[24]

Foreign Accented English Speech: The Independent Variable

The treatment tapes were four 40 second audio tapes produced at 3.5 IPS on a Wollensak portable tape recorder. Adopting the matched guise technique[25] two female Oklahoma born modern language instructors read a passage from Aristotle, first, in standard English and then in foreign accented English. This process yielded two standard English passages, one Spanish accented English passage, and one French accented English passage. The four passages were placed on a master tape separated by white leader tape.

Three graduate students identified the accent group to which each tape belonged and rated each accent on a five point degree of

accentuation scale. Each correctly identified the accent group of the tape and rated the accents as extreme.

Credibility: The Dependent measure

A semantic differential type scale with 18 bipolar scales was used to measure the credibility of the speakers.[26] McCroskey's credibility scale factors into three dimensions which measure the authority, character, and dynamism of the speaker. In order to avoid potential response bias the positive and negative poles of nine of the 18 scales were randomly switched.

Coding ranged from negative to positive such that a score at the negative pole received a numerical value of one and a score at the positive pole received a numerical value of seven. Data were transferred to computer cards prior to analysis.

Analysis

Data were analysed by means of factor analytic techniques. The program provided a principle components solution and an orthogonal varimax rotation of the data.

RESULTS

Three criteria were used in the interpetation of the factor analysis used in this study: (1) a factor must consist of at least two scales with loadings of 0.50 or better;[27] (2) each scale must have a loading of at least 0.40 on the factor to be considered significant;[28] and (3) each factor must contribute at least 11.56 percent of the total variance (square of Pearson Product Moment correlation required for significance with df = 30). Further, scales were considered pure if they loaded less than 0.30 on any other other factor;[29] heavy if they load 0.75-0.99 on the factor; moderate if they load 0.60-0.75 on the factor; and light if they load 0.40-0.60 on the factor.

Table 1 illustrates the factor structure of respondents credibility reactions to the first speaker's standard English guise. Three factors

insert Table 1 about here

account for 53.03 percent of the total variance. Factor one represents expertise with three pure scales and two scales with moderate loadings on the factor. The following three scales load purely on expertise; expert-inexpert, intelligent-unintelligent; and qualified-unqualified while the following two scales load moderately on the factor; reliable-unreliable and informed-uninformed.

Factor two represents character and three scales load purely on the factor and two scales load weakly on the factor. The friendly-unfriendly,

TABLE 1

FACTOR STRUCTURE OF CREDIBILITY RATINGS ATTRIBUTED TO STANDARD ENGLISH FEMALE SPEECH

VARIABLE/FACTOR	I	II	III
DISHONEST-HONEST	.39	.24	.04
FRIENDLY-UNFRIENDLY	.06	.88	.23
PLEASANT-UNPLEASANT	-.05	.87	.24
AWFUL-NICE	.16	.73	.12
UNSELFISH-SELFISH	.07	.46	.19
SINFUL-VIRTUOUS	.39	-.14	.07
EXPERT-INEXPERT	.90	.02	.04
RELIABLE-UNRELIABLE	.65	.11	.13
UNINFORMED-INFORMED	.73	.02	.13
UNQUALIFIED-QUALIFIED	.78	.09	.25
INTELLIGENT-UNINTELLIGENT	.82	.16	.08
WORTHLESS-VALUABLE	.39	.49	.23
ACTIVE-PASSIVE	.23	.37	.68
WEAK-AGGRESSIVE	.10	.20	.89
TIRED-ENERGETIC	.31	.35	.69
EMPHATIC-HESITANT	.02	.01	.22
BOLD-TIMID	.02	.15	.70
FAST-SLOW	.10	.26	.43

pleasant-unpleasant, and nice-awful scales load purely on character while selfish-unselfish and valuable-worthless load weakly on the factor.

Factor three represents dynamism and has two pure loadings, two moderate loadings, and one weak loading. The aggressive-weak and energetic-tired scales load purely on dynamism; the active-passive and the bold-timid scales load moderately on the factor; and the fast-slow scale loads weakly on the factor.

Table 2 shows the factor structure of the respondents reactions to

insert Table 2 about here

the first speaker's Spanish accented English speech. Two factors emerge and account for 27.88 percent of the total variance. The first factor represents expertise and two scales, expert-inexpert and qualified-unqualified load purely on the factor while informed-uninformed and intelligent-unintelligent load weakly on the factor. The second factor represents character and has two pure loadings: friendly-unfriendly and pleasant-unpleasant.

Table 3 demonstrates the factor structure underlying reactions to the second standard English speaker. Four factors account for 62.50 percent of the variance. Factor one represents dynamism and has two scales with pure loadings, three with moderate loadings, and one with a weak loading. The active-passive and the aggressive-weak scales load purely on dynamism; the emphatic-hesitant, bold-timid, and the fast-slow scales load moderately on the factor while the energetic-weak scale loads weakly.

The second factor represents expertise and two scales load purely, one loads heavily, one loads moderately, and two load very weakly on the

TABLE 2

FACTOR STRUCTURE OF CREDIBILITY ATTRIBUTED TO SPANISH ACCENTED ENGLISH FEMALE SPEECH

VARIABLE/FACTOR	I	II
DISHONEST-HONEST	.26	.04
FRIENDLY-UNFRIENDLY	-.16	.90
PLEASANT-UNPLEASANT	-.26	.89
AWFUL-NICE	.00	.20
UNSELFISH-SELFISH	-.17	.10
SINFUL-VIRTUOUS	-.05	-.00
EXPERT-INEXPERT	-.86	.14
RELIABLE-UNRELIABLE	-.31	.24
UNINFORMED-INFORMED	-.53	.28
UNQUALIFIED-QUALIFIED	-.35	.29
INTELLIGENT-UNINTELLIGENT	-.49	.12
WORTHLESS-VALUABLE	-.25	.18
ACTIVE-PASSIVE	-.10	.10
WEAK-AGGRESSIVE	-.16	.14
TIRED-ENERGETIC	-.27	.14
EMPHATIC-HESITANT	-.11	.31
BOLD-TIMID	-.13	.07
FAST-SLOW	-.67	.06

the factor. The informed-uninformed and the valuable-worthless scales load purely on dynamism, the expert-inexpert scale loads heavily, the qualified-unqualified scale loads moderately, while the reliable-unreliable and the intelligent-unintelligent scales load quite weakly.

The third and fourth factors represent character and all scales load negatively on these factors. Two scales, friendly-unfriendly and pleasant-unpleasant load purely on the factor (3) while a third, nice-awful, loads weakly on the factor. One scale, honest-dishonest, has a pure loading on factor four; one scale has a moderate loading, sinful-unsinful; and the third, nice- awful, has a weak loading on character.

insert Table 3 about here

Table 4 represents the credibility reactions of listeners to the

insert Table 4 about here

second speaker using a French accented English guise. Three factors account for 62.85 percent of the total variance. The first factor represents character with pure loadings on three scales, moderate loadings on two scales, and a weak loading on one scale. The pleasant-unpleasant, nice-awful, and selfish-unselfish scales load purely on character; the honest-dishonest, virtuous-sinful, and valuable-worthless scales load moderately on the factor; while the friendly-unfriendly scale loads weakly on character.

The second factor represents dynamism and three scales load purely, one scale loads heavily, two scales load moderately, and one scale loads weakly on dynamism. The aggressive-weak, emphatic-hesitant, and bold-timid scales load purely on dynamism, the fast-slow scale loads heavily, the energetic-tired scale loads moderately, and the active-passive scale

TABLE 3

FACTOR STRUCTURE OF CREDIBILITY RATINGS ATTRIBUTED TO STANDARD ENGLISH FEMALE SPEECH

VARIABLE/FACTOR	I	II	III	IV
DISHONEST-HONEST	-.09	.28	-.17	-.86
FRIENDLY-UNFRIENDLY	.14	.30	-.77	-.20
PLEASANT-UNPLEASANT	.18	.25	-.83	-.14
AWFUL-NICE	.25	.31	-.47	-.56
UNSELFISH-SELFISH	.19	.32	-.23	-.22
SINFUL-VIRTUOUS	-.10	.43	-.13	-.66
EXPERT-INEXPERT	.08	.79	-.16	-.28
RELIABLE-UNRELIABLE	-.00	.41	-.23	-.27
UNINFORMED-INFORMED	.13	.76	-.25	-.30
UNQUALIFIED-QUALIFIED	.09	.72	-.24	-.44
INTELLIGENT-UNINTELLIGENT	-.09	.45	-.38	-.21
WORTHLESS-VALUABLE	.06	.78	-.16	-.08
ACTIVE-PASSIVE	.82	.16	.00	-.02
WEAK-AGGRESSIVE	.86	.09	-.11	-.15
TIRED-ENERGETIC	.57	.17	-.47	-.09
EMPHATIC-HESITANT	.61	.01	-.21	-.05
BOLD-TIMID	.73	-.02	-.15	.25
FAST-SLOW	.75	-.02	-.07	.09

TABLE 4

FACTOR STRUCTURE OF CREDIBILITY RATINGS ATTRIBUTED TO FRENCH ACCENTED ENGLISH FEMALE SPEECH

VARIABLE/FACTOR	I	II	III
DISHONEST-HONEST	.65	-.01	-.52
FRIENDLY-UNFRIENDLY	.56	.19	-.12
PLEASANT-UNPLEASANT	.83	.15	-.15
AWFUL-NICE	.82	.16	.08
UNSELFISH-SELFISH	.88	-.10	-.19
SINFUL-VIRTUOUS	.69	-.10	-.10
EXPERT-INEXPERT	.09	.22	-.86
RELIABLE-UNRELIABLE	.33	.23	-.70
UNINFORMED-INFORMED	.04	.16	-.58
UNQUALIFIED-QUALIFIED	.10	.11	-.86
INTELLIGENT-UNINTELLIGENT	.37	.29	-.67
WORTHLESS-VALUABLE	.60	-.08	-.45
ACTIVE-PASSIVE	.12	.54	-.08
WEAK-AGGRESSIVE	.01	.85	-.07
TIRED-ENERGETIC	.15	.62	-.27
EMPHATIC-HESITANT	-.16	.82	-.05
BOLD-TIMID	.04	.81	-.24
FAST-SLOW	.20	.78	-.28

TABLE 5

COMMUNALITIES OF SIGNIFICANT FACTORS UNDERLYING CREDIBILITY REACTIONS TO STANDARD AND FOREIGN ACCENTED FEMALE ENGLISH SPEECH

VARIABLE/ACCENT	h^2 Eng	h^2 Sp
DISHONEST-HONEST	.20	.06	.84	.68
FRIENDLY-UNFRIENDLY	.82	.83	.70	.35
PLEASANT-UNPLEASANT	.80	.85	.77	.73
AWFUL-NICE	.56	.04	.68	.69
UNSELFISH-SELFISH	.23	.03	.22	.80
SINFUL-VIRTUOUS	.16	.00	.63	.47
EXPERT-INEXPERT	.80	.75	.71	.78
RELIABLE-UNRELIABLE	.44	.14	.28	.65
UNINFORMED-INFORMED	.53	.36	.72	.35
UNQUALIFIED-QUALIFIED	.67	.79	.76	.76
INTELLIGENT-UNINTELLIGENT	.69	.25	.38	.64
WORTHLESS-VALUABLE	.44	.09	.63	.56
ACTIVE-PASSIVE	.65	.00	.69	.30
WEAK-AGGRESSIVE	.84	.01	.76	.73
TIRED-ENERGETIC	.67	.09	.57	.47
EMPHATIC-HESITANT	.04	.10	.41	.60
BOLD-TIMID	.50	.01	.61	.70
FAST-SLOW	.25	.40	.56	.70

TABLE 6

PERCENTAGE OF TOTAL VARIANCE ACCOUNTED FOR BY SIGNIFICANT FACTORS UNDERLYING CREDIBILITY REACTIONS TO STANDARD AND FOREIGN ACCENTED FEMALE ENGLISH SPEECH AND THEIR EIGEN VALUES

	Percentage Variance/Eigen Value			
ACCENT/FACTOR	I	II	III	IV
STANDARD ENGLISH$_1$	20.69	15.52	16.84	
	3.72	3.03	2.79	
SPANISH ACCENTED ENGLISH	16.15	11.73		
	2.91	2.11		
STANDARD ENGLISH$_2$	18.98	18.79	12.54	12.18
	3.42	3.38	2.26	2.19
FRENCH ACCENTED ENGLISH	22.72	20.39	19.74	
	4.09	3.67	3.55	

loads weakly.

The third factor represents expertise and has two scales loading purely, two scales loading moderately, and two scales loading weakly. The expert-inexpert and the qualified-unqualified scales load purely on expertise, the reliable-unreliable and the intelligent-unintelligent scales load moderately, while the informed-uninformed and valuable-worthless scales load weakly on expertise. Each scale has a negative loading on this factor.

DISCUSSION

The analysis of the data reveals the predicted concept scale interaction between concepts operationalized as standard and foreign accented English speech and McCroskey's semantic differential type credibility scale. A concept scale interaction implies a unique relationship between the concept measured and the scales comprising the semantic differential type measurement.[30] The following alterations in the factor structure of credibility attributed to a speaker using standard English and foreign accented English guises suggest the existance of the interaction: (1) the dynamism factor disappeared and the authoritativeness factor gained a negative valence when the first speaker switched from her standard English to her Spanish accented English guise; and (2) the authoritativeness factor adopted a negative sign while the character factor adopted a positive sign when the second speaker switched from her standard English guise to her French accented English guise. One may conclude that concept-scale interactions exist even when the concept is operationalized as variations in accents.

An exploration into the causes of this alteration of factor structure seems called for. The authoritativeness dimension of McCroskey's credibility scale apparently accounts for most of this alteration as in both cases valences switched from positive to negative upon alteration of accent. This follows as listeners attributed lower authoritativeness ratings to

the first speaker's Spanish accented guise than to her standard English guise while they attributed higher ratings to speaker # 2's French accented guise than to her standard English guise.[31]

The dynamism dimension of the semantic differential disappeared as the first speaker switched from her standard English guise to her Spanish accented English guise.[32] Finally, the negative sign on the character dimension of the semantic differential became positive when speaker # 2 switched from her standard English guise to her French accented English guise. This finding is consistent with the positive stereotype ratings attributed to French accented female speech in some Canadian research.[33]

This study has some limitations for which future research may correct. The small n size (n = 32) allowed by the repeated measures element of the Latin Square design necessitated the 11.56 percent of the variance explained criterion for each factor. This high criterion limited further exploration of the data in respect to potentially relevant minor factors. Further, it is recommended that future research projects measure the dimensions underlying standard and non-standard male speech as sex may influence credibility ratings.[34] Finally, the repeated measures design may have allowed a learning or fatigue bias to enter and influence the project's outcome. Future researchers would be well advised to use larger numbers of subjects, alter the sex of the stimulus, and use independent measures designs.

NOTES

[1]W. E. Lambert, R. C. Hodgson, R. C. Gardiner, and S. Fillenbaum, "Evaluational Reactions to Spoken Languages," Journal of Abnormal and Social Psychology, LX (1960), 44-51.

[2]Warren T. Norman, "Toward an Adaquate Taxonomy of Personality Attributes: Replicated Factor Structures in Peer Nomination," Journal of Abnormal and Social Psychology, LXVI (1963), 574-583.

[3]James C. McCroskey, "Scales for the Measurement of Ethos," Speech Monographs, XXXIII, 3 (1966), 65-72.

[4]Jack L. Whitehead, Jr., "Factors of Source Credibility," Quarterly Journal of Speech, LIV, 2 (1968), 59-63.

[5]David K. Berlo, James B. Lemert, and Robert J. Mertz, "Dimensions for Evaluating the Acceptability of Message Sources," Public Opinion Quarterly, XXXIII (Winter, 1969-70), 563-576.

[6]Gary Cronkhite, Persuasion: Speech and Behavioral Change (New York: Bobbs Merrill, 1969), p. 174.

[7]Charles E. Osgood, George J. Suci, and Percey H. Tannenbaum, The Measurement of Meaning (Urbana: The University of Illinois Press, 1971), pp. 73-74; 177-188.

[8]Gerald R. Miller and Murray A. Hewgill, "The Effect of Variations in Non-fluency on Credibility Ratings of Source Credibility," Quarterly Journal of Speech, L (1964), 36-44.

[9]K. K. Sereno and G. J. Hawkins, "The Effects of Variations in Speakers' Non-fluency on Audience ratings of Attitude toward the Speech Topic and the Speaker's Credibility," Speech Monographs, XXXIII (1967), 58-64.

[10]James C. McCroskey and Samuel R. Mehrley, "The Effects of Disorganization and Non-Fluency on Attitude Change and Source Credibility," Speech Monographs, XXXVI (1969), 13-21.

[11]D. W. Addington, "The Effect of Vocal Variations on Ratings of Source Credibility," Speech Monographs, XXXVIII (1971), 242-247.

[12]W. Barnett Pearce, "The Effect of Vocal Cues on Credibility and Attitude Change," Western Speech, XXXV (1971), 176-184.

[13]W. Barnett Pearce and Forrest Conklin, "Nonverbal Vocalic Communication and Perceptions of a Speaker," Speech Monographs, XXXVIII (1971), 235-241.

[14]W. Barnett Pearce and Bernard J. Brommel, "Vocalic Communication in Persuasion," Quarterly Journal of Speech, LVIII, 3 (1972), 288-306.

[15]George N. Putnam and Edna O'Hern, "The Status Significance of an Isolated Urban Dialect," Language, XXXI (No. 53 suppliment, Part 2, 1955), 1-32.

[16]L. S. Harms, "Listener Judgments of Status Cues in Speech," Quarterly Journal of Speech, XLVII, 4 (1961), 164-68.

[17]William Labov, The Social Stratification of English in New York City (Washington: Center for Applied Linguistics, 1966).

[18]L. S. Harms, "Status Cues in Speech: Extra-race and extra-region identification," Lingua, XII (1963), 300-306.

[19]James D. Moe, "Listener Judgments of Status Cues in Speech: A Replication and Extention," Speech Monographs, XXXIX, 2 (1972), 144-147.

[20]Jerry Burk, "Sensory Processes and Perception," Unpublished paper, The University of Montana, 1968.

[21]J. Kevin Toomb, James G. Quiggins, Dennis L. Moore, Lynn B. MacNeill, and Charles M. Liddell, "The Effects of Regional Dialects on Initial Source Credibility," Paper presented at the meeting of the International Communication Association, Atlanta, April, 1972.

[22]Joyce Buck, "The Effects of Negro and White Dialectical Variations upon Attitudes of College Students," Speech Monographs, XXXV (1968), 181-186.

[23]D. T. Campbell and J. C. Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally, 1966), p 50-52.

[23]D. T. Campbell and J. Stanley, Experimental and Quasi-experimental Designs for Research (Chicago: Rand McNally, 1966), pp. 50-52.

[24]Ben Winer, Statistical Principles in Experimental Design (New York: McGraw-Hill, 1962).

[25]Lambert, pp. 44-51.

[26]McCroskey, pp. 65-72.

[27]Robert F. Appelbaum and Karl W. Anatol, "The Factor Structure of Source Credibility as a Function of the Speaking Situation," Speech Monographs, XXXIX, 3 (1972), p. 217.

[28]Ibid., p. 217.

[29]Osgood, pp. 73-74; 177-188.

[30]Ibid., pp. 73-74; 177-188.

[31]Michael G. Ryan, "Credibility, Stereotypes, and Foreign Accented English Speech," Paper presented to the annual meeting of the Speech Communication Association, Chicago, Dec., 1972, pp. 19-22.

[32]Ibid., pp. 19-22.

[33]George S. Larimer, "Indirect Assessment of Intercultural Prejudices," in Social Psychology: The Canadian Context, ed. J. W. Berry and J. S. Wilde (Toronto: McClellant and Stewart, 1972), pp. 59-68.

[34]Ibid., pp. 59-68.